

DIALOGIP[™]**EXCIMER LASER****Publication Number:** 03-135089 JP 3135089 A**Published:** June 10, 1991**Inventor:**

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To reduce deterioration of gas, to stabilize a control system itself and to obtain an excimer laser having a stable output by detecting an amount of gas a corresponding a predetermined gas state, and controlling the gas state based on the detected result.

CONSTITUTION

As gas state detecting units, a laser average output meter 7, a laser output waveform measuring unit 8, a discharge voltage waveform measuring unit 9, a spectral analyzer 10, etc., are provided, as gas state

control means, rare gas cylinders 11, 12, a halogen gas cylinder 13, a gas injection flowrate regulator 14, a gas discharge vacuum pump 15, and a control unit 16 for instructing selection and sequence of them are further provided, and a control unit 18 for controlling charging voltage, repetitions, etc., of a charging power source 17, etc., is further provided. With this structure, whether the system is a stable discharging state or not, which direction the system is varied can be determined as the entire gas state of gas composition, pressure, etc., and the gas state can be controlled based on the detected state. Further the stability of a discharge system, the varying direction of the laser output are understood by corresponding the laser output to the gas state.

JAPIO

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